from Kandavu, which can of course only be *P. kandavensis.* The third (Layard, Proc. Zool. Soc. 1879, p. 147; not 'Ibis' of that year as erroneously quoted by Dr. Gadow) also refers to *P. kandavensis.*

Male. Yellow supraloral patch absent; rectrices nearly black; throat white, separated from the lemon-yellow of the rest of the underparts by a broad black collar.

The females of many of these species appear to differ from each other even more than the males do, but until the differences between adult females, immature females, and immature males are discovered, it would be rash to lay much stress upon the characters by which they can apparently be distinguished from each other.

XII.—*Notes on* Eurystomus orientalis.

By H. E. Dresser, F.L.S., F.Z.S.

In a recently published part of the Proc. Zool. Soc. (P. Z. S. 1890, pp. 550–552), Mr. R. B. Sharpe has described three new species of *Eurystomus,* viz. *Eurystomus lætior, E. calonyx,* and *E. solomonensis,* the first two of which he has separated from *E. orientalis.* I have lately been working at this group, and as I have a considerable series in my possession from my own collection, and from those of the late Lord Tweeddale, Canon Tristram, Mr. Whitehead, and Mr. H. Seebohm, it may prove of some interest to see how far these specimens tend to confirm or to disprove Mr. Sharpe's conclusions, based on the rich collection in the British Museum, the larger portion of which, so far as *Eurystomus orientalis* is concerned, were obtained from the Hume Collection. Mr. Sharpe describes his *Eurystomus lætior* as being smaller than *E. orientalis,* as having the end of the tail black not marked with purplish blue, the head darker, the under surface brighter blue, the secondaries washed with purplish blue near the base of the outer web, and gives the habitat as the forests of Malabar, Nilghiris, Travancore Hills, and Ceylon. As regards size, he gives the length of the wing as 7·8 inches, whereas he gives that of *E. orientalis* as 7·4, and that of *E. calonyx* as also 7·4; therefore by his own showing *E. lætior* is the largest of the three.

As regards the richness of coloration on the underparts and the blackness of the head, the richest-coloured specimens in the series before me are certainly those from Borneo and the Philippines, and there are several specimens from the latter group of islands which agree closely with Mr. Sharpe's description. I have examined two specimens from Ceylon, both of which agree with the form he names *E. calonyx* rather than with *E. lætior*. The form described under the name of *E. calonyx*, he states, differs from *E. orientalis* in having "the end of the tail black washed with purplish blue, and the whole of the black secondaries also washed with purplish blue;" and he gives its habitat as the "Himalayan Terai from Kumaon to Darjiling and Upper Assam, probably breeding throughout the whole of this range . . . from the Sardah to the Ganges, but particularly abundant in the Kotree Doon; found in summer in Eastern Siberia and Northern China, and appears to winter in Southern Tenasserim and the Malayan Peninsula, Malacca, &c."

In the series before me there is one specimen from Amoy which agrees closely with his description of *E. orientalis* and not with *E. calonyx*, and one from Camboja which agrees with Mr. Sharpe's *E. calonyx*. This latter form certainly not only winters in the Philippines, but breeds there, and is found at all seasons of the year, as there are specimens of it in the Tweeddale Collection obtained in February, March, May, June, July, August, September, and November. It appears that though the present species is partially migratory in the northern portion of its range, it is resident elsewhere. Col. Legge says that it is resident in Ceylon, Mr. Whitehead assures me that it is resident in all parts of the Malayan Archipelago that he visited, and it appears also to be a resident in the Andamans and Philippines.

In order to show more clearly the forms which are found in the different localities, I give the following tabulated results of a comparison of the 64 specimens now before me. In his key to the species, Mr. Sharpe states that *E. orientalis* and *E. lætior* have the terminal half of the tail black, not shaded with purplish blue, whereas *E. calonyx* has the terminal half of the tail black conspicuously washed with purplish blue. I find, however, that the blue on the tail varies so greatly that it is best to separate the specimens into three categories, viz., those having the basal half of the tail only washed with blue, those having the tail from half to two-thirds washed with blue, and those having the tail washed with blue above two-thirds of its length, the two latter being, according to Mr. Sharpe, referable to his *E. calonyx*.

Locality.	Number of Specimens.	Tail washed with blue			Secondaries washed with blue	
		on basal half only.	from half to ⅔rds.	above ⅔rds.	slightly.	conspicuously.
Malacca	6	3	1	2	2	4
Java	1	..	..	1	..	1
Sumatra	1	1	..	..	1	
Billeton	1	1	..	..	1	
Borneo	2	..	1	1	..	2
Palawan	1	imperfect		..	..	1
Andamans	5	5	..	..	5	
Keeling Island.	1	..	..	1	..	1
Celebes	5	1	2	2	4	1
Ceylon	2	..	1	1	1	1
Labuan	2	..	1	1	..	2
Philippines ..	20	8	12	..	15	5
Sanghir Island	2	1	..	1	1	1
Guimeras	1	..	1	..	..	1
Ternate	1	..	..	1	..	1
Ambru	1	..	1	..	..	1
Amoy........	1	1	..	..	1	
Camboja	1	..	..	1	..	1
Tenasserim ..	4	1	2	1	1	3
Karen Hills ..	1	..	..	1	..	1
Khasia Hills ..	1	..	..	1	..	1
Arrakan Hills .	1	..	..	1	..	1
Sikkim	3	..	1	2	..	3
	64	22	23	18	32	32

I may remark that the specimens from the Andamans vary less *inter se* than those from any other locality, and that they have, as pointed out by Mr. Sharpe, the bill rather larger, in that respect somewhat resembling *Eurystomus cras-*

sirostris. The variation in tone of colour is by no means small, some being greener, and some bluer than others, but much depends on the light, as in some lights the bird appears bluer or greener than it does in others. The greenest specimen I have examined is one from Tenasserim, and the bluest one from the Philippines, and the richest examples in general coloration and having the head darkest are some from the Philippines and N. Borneo.

The only conclusion at which I can arrive is that neither *Eurystomus lætior* nor *E. calonyx* are valid species, and that both should be united to *Eurystomus orientalis*. It is easy enough, as any ornithologist who has examined large series will know, to find a sufficient individual variation in tone of colour (more especially in richly coloured birds) in a large series to enable one to separate them into several groups; but when each group is found to be spread over almost all the range, and not to occupy any separate region, these slight variations cannot possibly be considered as of any specific value. To adopt such characters would only result in an indefinite multiplication of bad species.

I have made careful measurements of the entire series, but the examples from all the localities vary so considerably that it is scarcely worth while to give full particulars, and I will only point out that the variations are as follows:—gape 1·35 to 1·5 inch; wing 7·1 to 7·75; tail 3·9 to 4·5; tarsus 0·7 to 0·75. The largest specimen is from Ambru, and the smallest one from Sanghir Island.

As regards Mr. Sharpe's third new species, *Eurystomus solomonensis*, I have examined, besides the three specimens in the British Museum, two others from Guadalcanar, both of which have the bill without any black tip, whereas examples from New Guinea, New Britain, and New Ireland all have the culmen slightly tipped with black. Hence this character, although but a small one, appears to be constant, and the Solomon Island bird may therefore be looked on as fairly separable from *Eurystomus crassirostris*. The specific name, however, should, I think, be spelt *salomonensis* and not *solomonensis*.